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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068.304	02/05/2002	Shoji Hinata	9319S-000323	9656
27572	7590	11/03/2004	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			CHOWDHURY, TARIFUR RASHID	
P.O. BOX 828			ART UNIT	PAPER NUMBER
BLOOMFIELD HILLS, MI 48303			2871	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/068,304

Applicant(s)

HINATA ET AL.

Examiner

Tarifur R Chowdhury

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication; even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004 and 24 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,4-6,11,15,17,19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1,3,7-10,12-14,16 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05/28/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. In the information disclosure statement filed on 05/28/04, applicant cited "Communication for Chinese Patent Office re: counterpart application." As the other document. However, applicant failed to provide any English translation of such communication. Accordingly it was not considered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

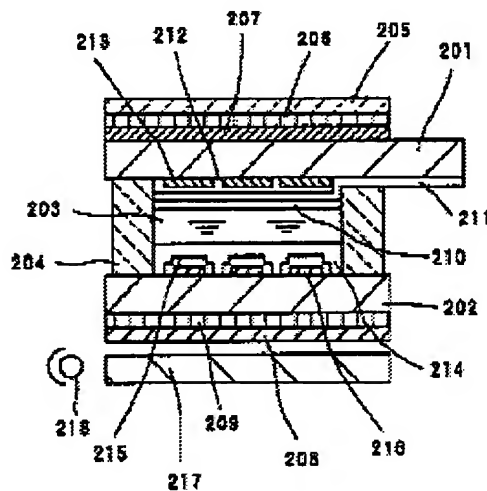
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3, 7-10, 12-14, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maeda et al., (Maeda), JP 2000-066199 (cited by applicant) in view of Nakazawa et al., (Nakazawa), USPAT 5,736,278.**

5. Maeda discloses (abstract) and shows in Fig. 1, a liquid crystal display device comprising:

- a liquid crystal (203) arranged between first (202) and second (201) substrates;



- a plurality of pixel areas (applicant's dot areas);
- a reflection layer (216) (applicant's reflective conductive film) on the first substrate (202), and reflecting light from outside of the second substrate (201) (page 11, paragraph 0048);
- transparent electrode (215) made of ITO (page 11, paragraph 0045) (applicant's light transmitting metal oxide film) laminated on the reflective conductive film so that the outer edge of the metal oxide film is in contact with the first substrate (202); and

wherein the outer edge of the metal oxide film transmits light from outside the first substrate, while the reflective conductive film reflects light from the outside of the second substrate, in each of the dot areas.

Maeda differs from the claimed invention because he does not explicitly disclose the limitation such as a black mask being formed between adjacent dot areas.

Nakazawa discloses a liquid crystal display wherein the black matrix is formed between adjacent pixel areas (applicant's dot areas). Nakazawa further discloses that black matrices are provided between the pixels in order to enhance display contrast (col. 2, lines 1-7).

Nakazawa is evidence that ordinary workers in the art would find a reason, suggestion or motivation to employ black mask between adjacent dot areas.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device Maeda by forming black mask between adjacent dot areas in order to enhance display contrast, as per the teachings of Nakazawa.

Accordingly, claims 1 and 13 would have been obvious.

As to claim 3, Maeda also discloses that the edge in contact with the first substrate constitutes a light-transmitting portion in one display dot in a transfective system liquid crystal display (page 5, paragraph 0012).

As to claims 7-10, Maeda also discloses (page 6, paragraph 0014) and shows in Fig. 1 that the reflective conductive film and the metal oxide film form a first electrode for applying a voltage to the liquid crystal layer and that the liquid crystal device further comprising a second electrode (211) formed on the second substrate opposite to the first electrode, and a color layer (212) provided corresponding to the crossing regions between the first and second electrodes. Maeda also discloses (page 6, paragraph

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0014) that the first electrode is either a stripe electrode constituting a simple matrix system liquid crystal device or a dot electrode constituting an active matrix system liquid crystal device.

As to claim 12, Maeda also discloses (page 6, paragraph 0013) that the reflective conductive film is made of a single silver material.

As to claim 14, it is clear from Fig. 1 of Maeda that the area of the edge in contact with the first substrate (202) is at least 10%-30% of the area of one display dot to which the edge belongs.

As to claim 16, the method of manufacturing the liquid crystal device merely recites the step of forming each element and since each element must be formed to make the device, the method of manufacturing would have been obvious in view of the device.

As to claim 18, Maeda also discloses that the liquid crystal device is used in an electronic apparatus (page 2, paragraph 0001).

***Allowable Subject Matter***

6. Claims 2, 4, 5, 6, 11, 15, 17, 19 and 20 are allowed.

***Response to Amendment***

7. The certified English translation of the priority document filed on 08/24/04 to perfect the claim for priority is acknowledged and appreciated. Further a statement of common ownership to eliminate Hanakawa as a valid reference is acknowledged and appreciated. Accordingly, the rejection of claims 2, 4, 5, 15 and 17 has been withdrawn.

***Response to Arguments***

8. Applicant's arguments with respect to claims 1 and 16 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

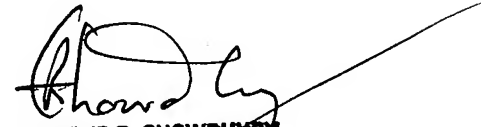
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC  
November 01, 2004



TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER